



Technical Service/Warranty Department  
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[www.childcheckmate.com](http://www.childcheckmate.com)

# CCMS END USER MANUAL

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EP1



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## 1 – EP1

### **Pinouts:**

#### **6 Pin Harness:**

The EP1 system uses a 6 pin harness for all of its basic functions. The correct orientation of the harness is marked by a **red** dot that must be matched up with the **red** dot situated on the EP1 unit itself.

The pinout for the six pin harness is as follows:

1. **Red Wire** → Battery
2. **Black Wire** → Ground
3. **Yellow Wire** → Ignition
4. **Blue Wire** → Deactivation Wire
5. **Brown Wire** → Activation Wire
6. **Green Wire** → Vehicle Horn  
(Through Relay)



#### **Rear Vehicle Transmitter (RVT):**

The EP1 system works in conjunction with a Rear Vehicle Transmitter (RVT) that acts as the reset button for the alarm system. The RVT is NOT a simple switch. The RVT is a module that pulses a ground signal at a frequency of 15Hz. This allows us to use already existing wiring in the bus to simplify installation. The RVT **CANNOT** be replaced by another switch or module.

The pinout for the RVT is as follows:

1. **Red Wire** → Battery
2. **Black Wire** → Ground
3. **Blue Wire** → Front Warning Buzzer  
(Ground Terminal)





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### Dome Light Harness (*Optional*):

The EP1 System is also capable of controlling the interior dome lights of the vehicle via the 2 pin harness that is available for purchase. The correct orientation of the harness is marked by an **orange** dot that must be matched up with the **orange** dot situated on the EP1 unit itself.

The pinouts for the Dome light harness is as follows:

1. Grey Wire → Brake Switch
2. Purple Wire → Dome Lights



### Upgrade Dome Light Harness:

This harness has all the required fuses, wires and a relay to ensure that the dome light function will function as intended. It is the recommended purchase.





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## ***Installation :***

Wiring schematics can be found at the end of the manual for further clarification.

### **Installing 6 Pin Harness :**

1. Connect the **black wire** to a good ground.
2. Connect the **red wire** to a 12V source that is always hot.
3. Connect the **yellow wire** to a 12V source that is hot when the ignition is on.  
\*It is recommended to connect to the small ignition terminal of the solenoid used for power in the driver's side panel\*
4. Connect the **blue wire** to the front warning buzzer for the rear door of the vehicle. (Ground Terminal)  
\*On school buses, there are two wires for the rear door warning buzzer; one becomes hot when the ignition is turned on while the other runs to the rear door switch. Connect it to the side of the terminal that runs to the rear door switch \*

\*\*If there is no front warning buzzer a wire must be run from the front of the vehicle to the rear in order to connect to the RVT\*\*

5. Connect the **brown wire** to a 12V source that becomes hot when a child is picked up.  
\*Connecting to the red overhead flashing lights is recommended\*
6. Connect the **green wire** to a relay that is connected to the horn.  
\*The **green wire** supplies a ground signal for the relay and cannot drive a horn directly. **A relay is always required to drive the horn\***

## Installing the RVT:

\*Note: If the **blue wire** is hooked up to a 12V source, it WILL damage the RVT and cause it to cease to function.

1. Connect the **red wire** to a 12V source that is hot when the ignition is turned on.  
 \*Connecting to the rear door buzzer is recommended\*
2. Connect the **black wire** to a good ground.
3. Connect the **blue wire** to the wire running to the front warning buzzer for the rear door of the vehicle.  
 \*The wire in question is the same wire that is connected to the **blue wire** of the 6 pin harness at the front of the vehicle.\*  
 \*\*If there is no front warning buzzer a wire must be run from the front of the vehicle to the rear in order to connect to the child check system.\*\*

## Installing Dome Light Harness (*Optional*):

1. Connect the **grey wire** to the side of the brake pedal that becomes hot when the brake pedal is pressed.

### 5 Pin Relay Installation:

Wire colours mentioned are consistent with the **Dome Light Harness** provided. (*Not to be confused with the wires from the 6 pin harness*) A 5 pin relay is required to drive the dome lights.

1. Cut the wire running from the dome light switch to the dome lights.
2. Connect Pin 87a (**Red Wire**) to the dome light switch.
3. Connect Pin 30 (**Blue Wire**) to the wire going to the dome lights from the switch.
4. Connect Pin 87 (**Yellow Wire**) to a 12V source that is always hot. (This line should be paired with a 20amp fuse)
5. Connect Pin 86 (**White Wire**) to a 12v source that is always hot. (This line should be paired with a 20amp fuse)

\*On the full harness provided the **white wire** and the **yellow wire** are connected together through one fuse and connected to a **red wire** with an eyelet for easy connection to a 12v source.\*

6. Connect pin 85 (**Purple Wire**) to the **Purple Wire** of the dome light harness.(2 pin harness)





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## Location and mounting of the EP1 unit:

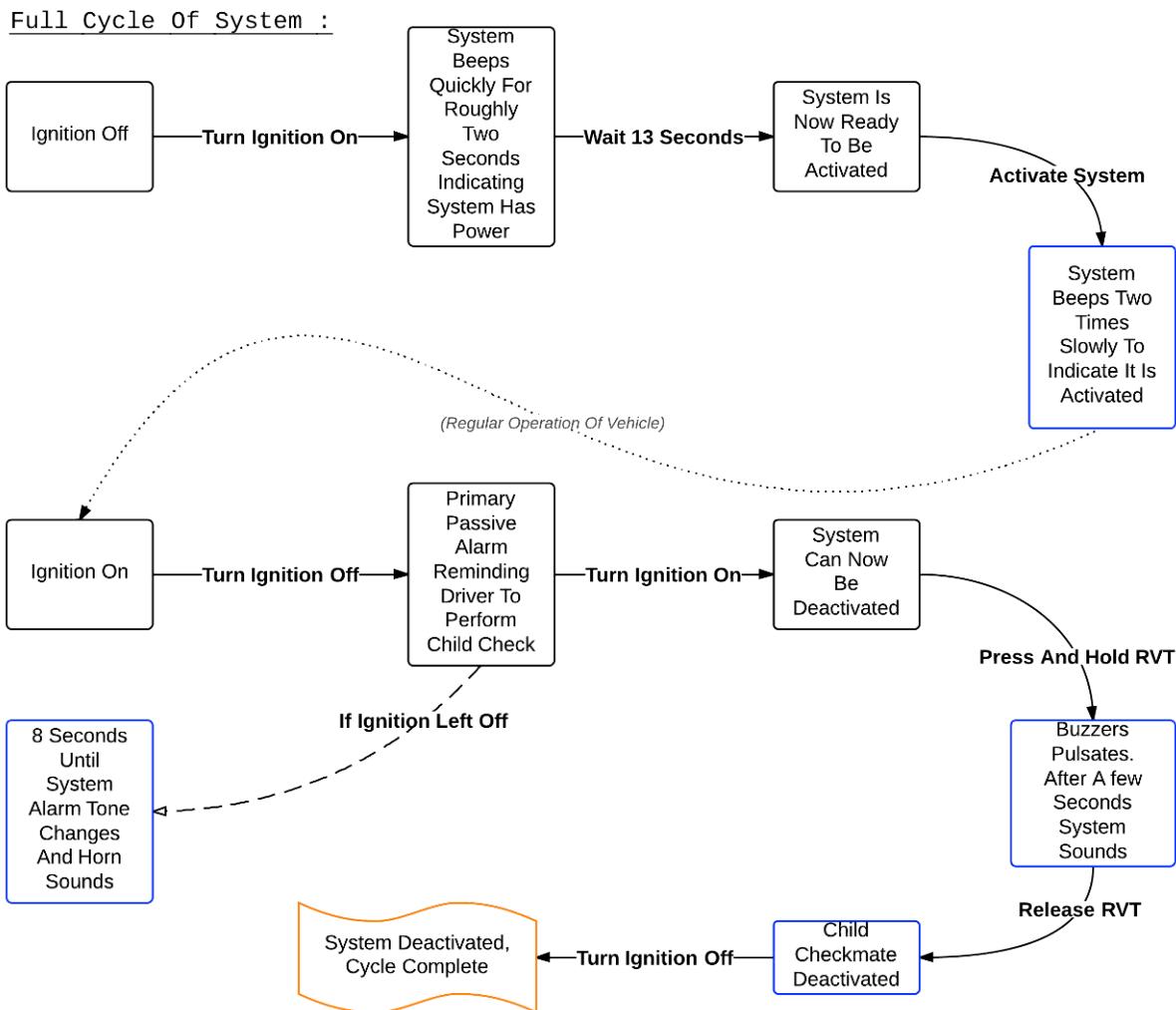
1. Locate a convenient mounting area for the EP1 Alarm Unit within the main electrical panel at the front of the vehicle.
2. Before securing the unit, check to ensure that its location is central enough so that all the required harnesses are able to reach the EP1.
3. Secure the unit to the wall using the double sided tape provided. Screws may also be used to further secure the unit.
4. Insert harnesses into their respective ports, ensuring that the coloured dots match up before inserting the harness into the system.



## Operation Guide:

### Flow Chart:

## 1-System Cycle





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All Child Check-Mate systems share a basic system cycle that governs its operation which does not change, regardless of model.

## Activating the Child Check-Mate System:

1. Turn the ignition on.
  - The system makes quick beeping noises for two seconds. This indicates that the system has power.
2. Wait 13 Seconds and then trigger the activation wire.
  - Activate the system by using the input where the **brown wire** is tied in.
  - The system will generate two long tones indicating that the system has been activated.

At this point the system is active and you may proceed with the regular operation of the vehicle.

## Deactivating the Child Check-Mate System:

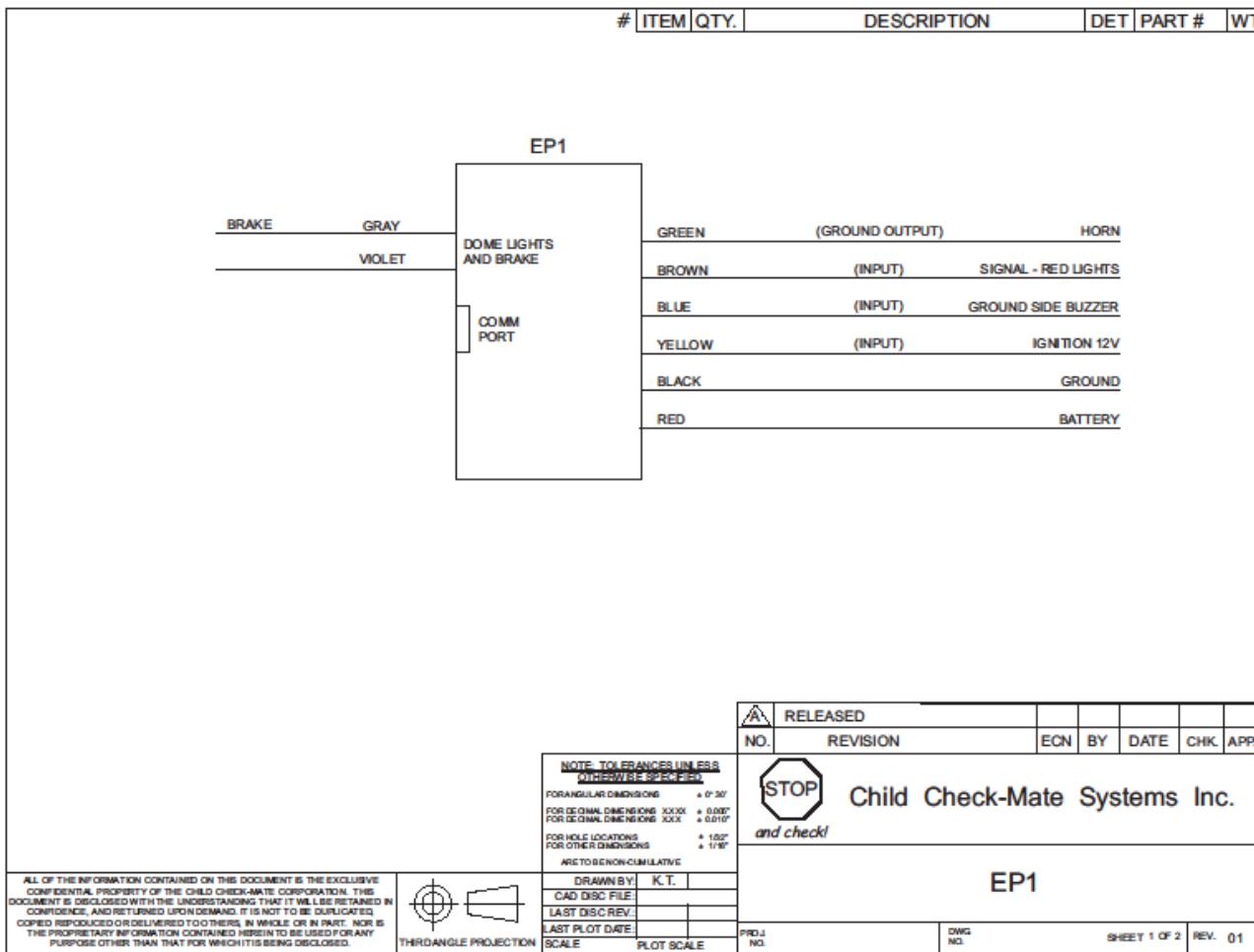
1. Turn the ignition off.
  - The system will make beeping noises reminding the driver that they must perform their child check
2. Turn the ignition on.
  - IF THE IGNITION IS NOT TURNED BACK ON WITHIN 8 SECONDS THE HORN WILL BEGIN TO SOUND. This is because the system assumes the driver has left the vehicle without performing their child check. Turn the ignition on to silence the alarm.
  - The system will make three tones every thirty seconds reminding the driver to perform their child check. *(OPTIONAL) After a set amount of time the system will assume the driver has left the vehicle without performing their child check and will sound the horn. Cycle the ignition (Off/On) to silence the alarm and reset the timer.*
3. Walk to the rear of the vehicle and press the RVT until the system makes quick beeps, similar to when the ignition is first turned on.
  - *(If connected) While holding the RVT down you will hear the front warning buzzer pulsate.*

At this point the system is deactivated and it is safe to turn off the ignition and leave the vehicle.

## 2- Appendix:

### EP1 Pinout Schematic:

Also available at <http://www.childcheckmate.com/support/>



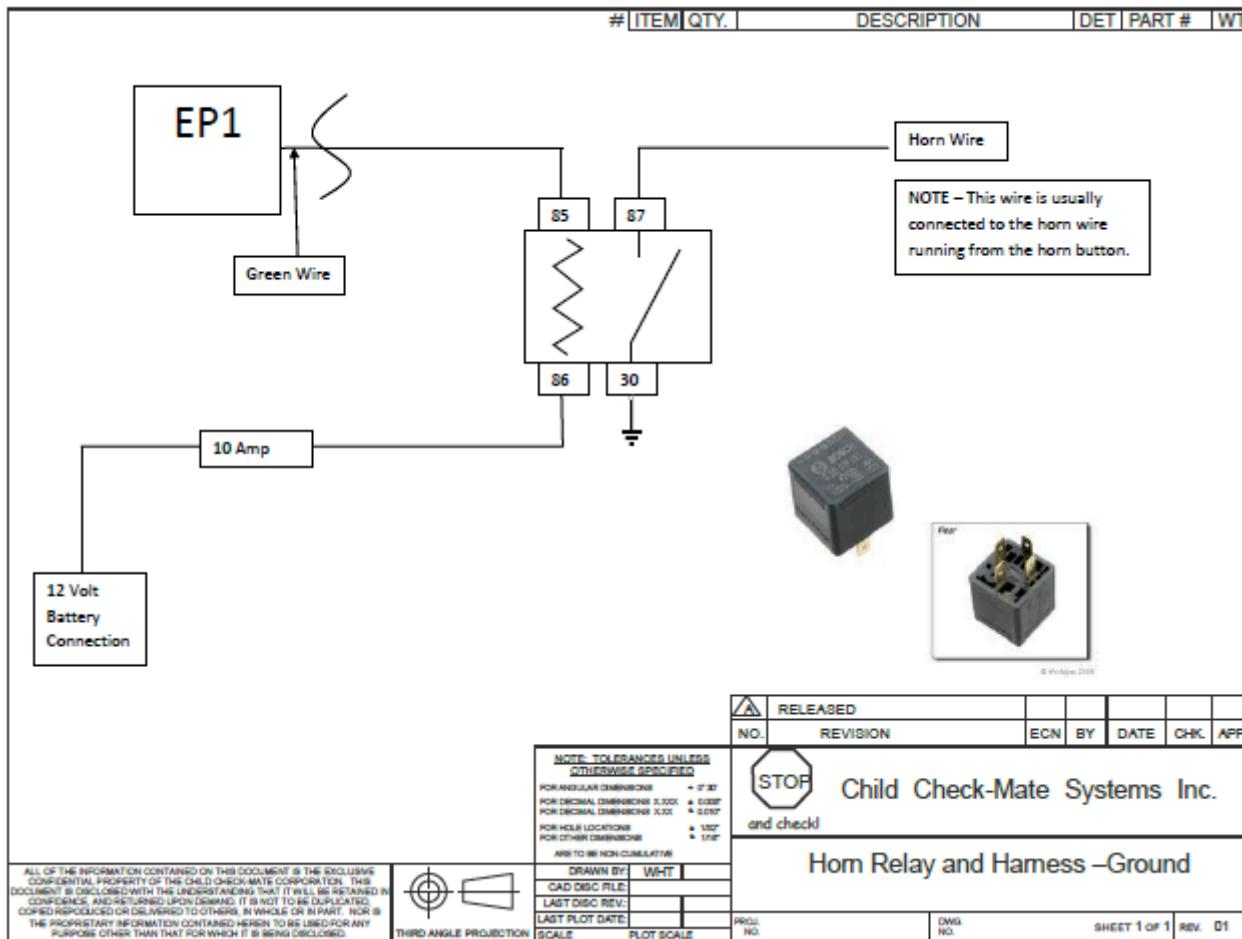


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## ***Horn Relay and General Relay Installation:***

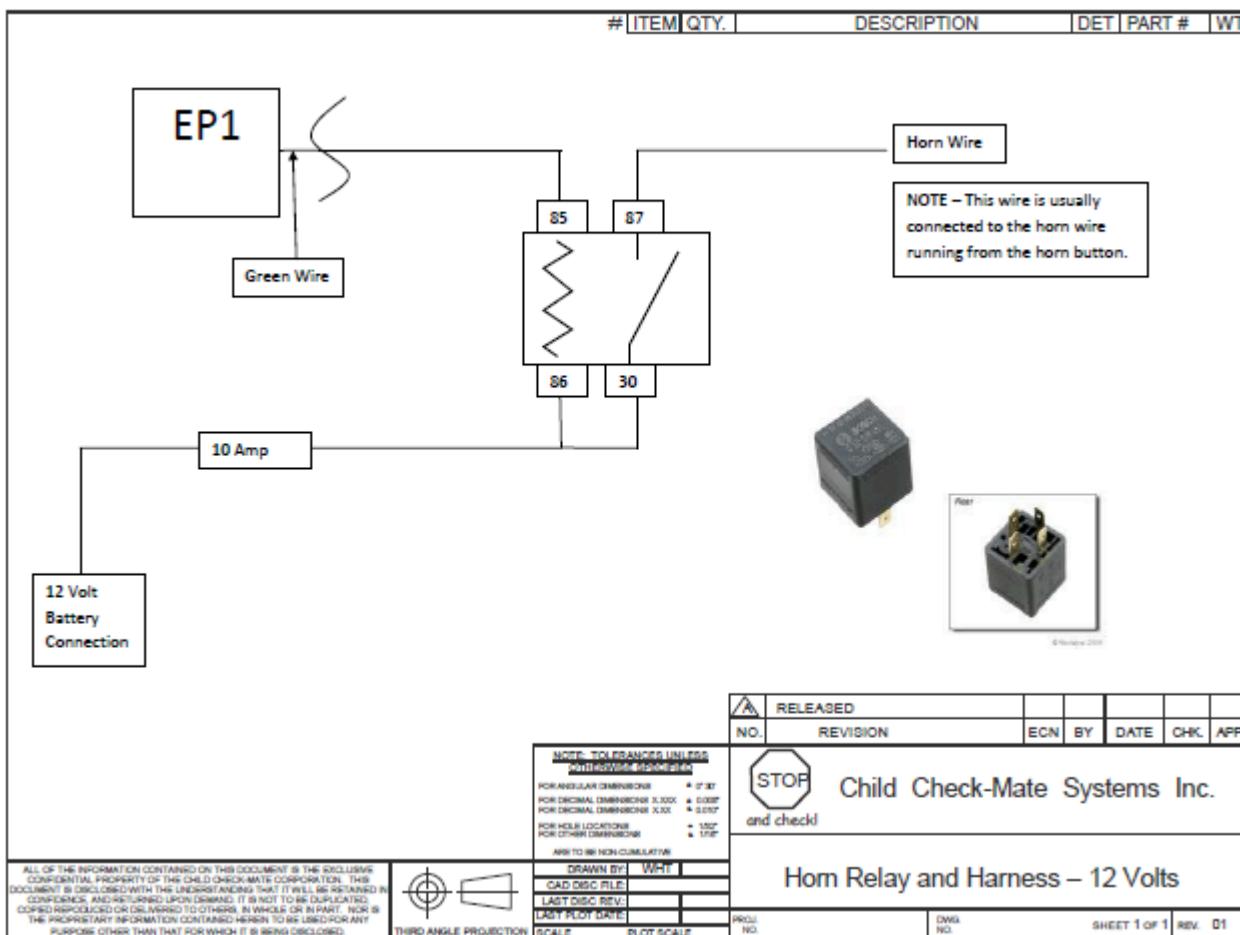
## If the horn requires a ground signal:

Also available at <http://www.childcheckmate.com/support/>

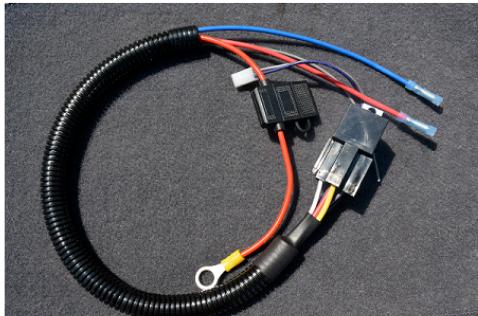
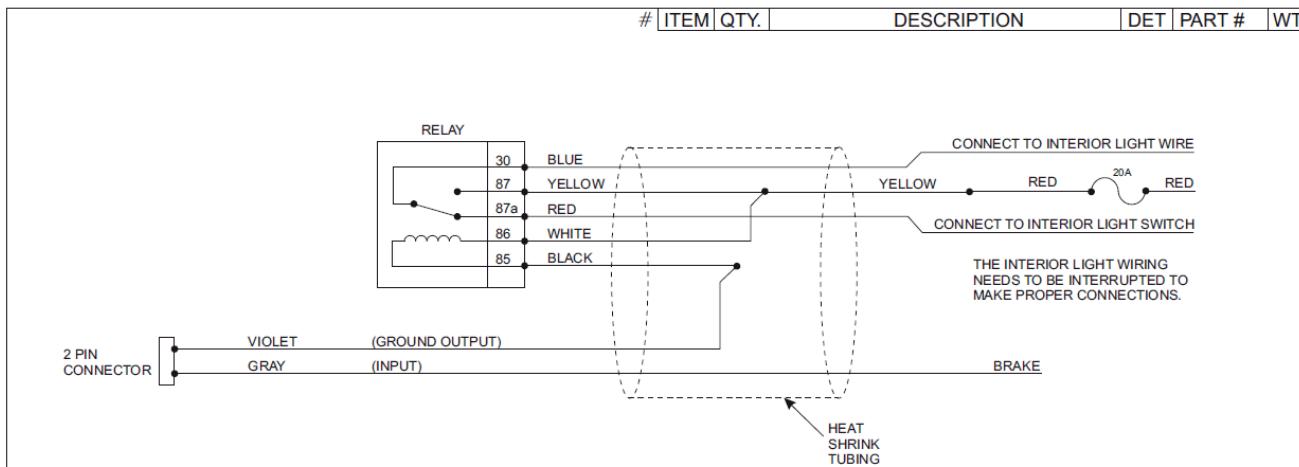


If the horn requires a 12V source:

Also available at <http://www.childcheckmate.com/support/>.



## EP1 Dome Light Upgrade Harness:



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PURPOSE OTHER THAN THAT FOR WHICH IT IS BEING DISCLOSED.



<b>STOP</b> and check!	RELEASED				
NO.	REVISION	ECN	BY	DATE	CHK. APP.
Child Check-Mate Systems Inc.					
EP1 UPGRADE DOME LIGHT HARNESS					
SCALE	PLOT SCALE	PROJ. NO.	DWG. NO.	SHEET 1 OF 1 REV. 01	

**NOTE: TOLERANCES UNLESS  
OTHERWISE SPECIFIED**  
FOR ANGULAR DIMENSIONS  $\pm 0.30^\circ$   
FOR DECIMAL DIMENSIONS XXXX  $\pm 0.005"$   
FOR DECIMAL DIMENSIONS X-XX  $\pm 0.010"$   
FOR HOLE LOCATIONS  $\pm 1/16"$   
FOR OTHER DIMENSIONS  $\pm 1/16"$   
ARE TO BE NON-CUMULATIVE

DRAWN BY: WHT  
CAD DISC FILE:  
LAST DISC REV:  
LAST PLOT DATE: